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NABL ACCREDITED AS PER ISO/IEC 17025:2005

Job No.: CECTC/VRB /Ward No.09/2018-19

Date: 02.04.2018

TEST REPORT

CLIENT	:	**Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub- Division, BBMP, Bangalore.
AGENCY	:	**Sri. Venugopal Reddy. B.** Contractor, Bangalore.
NAME OF THE WORK	:	Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division
REFRENCE	:	BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018
SAMPLE ID	:	Cement
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	160 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	375 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	28.00 %	-

Information is furnished by the Agency

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Job No.: CECTC/VRB /Ward No.09/2018-19 Date: : 02.04.2018

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub-Division, BBMP, Bangalore.

Agency : **Sri. Venugopal Reddy. B.** Contractor, Bangalore.

Name of Work : Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division

Refrence : BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018

Date of Testing : 02.04.2018

Material : Sand Total Wt. of Aggregates **1500**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	82	5.47	5.47	94.5	90-100
2.36	135	9.00	14.47	85.5	75-100
1.18	379	25.27	39.73	60.3	55-90
600 Micron	346	23.07	62.80	37.2	35-59
300 Micron	378	25.20	88.00	12.0	8-30
150 Micron	114	7.60	95.60	4.4	0-10

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Job No.: CECTC/VRB /Ward No.09/2018-19 Date: : 02.04.2018

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub-Division, BBMP, Bangalore.

Agency : **Sri. Venugopal Reddy. B.** Contractor, Bangalore.

Name of Work : Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division

Refrence : BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018

Date of Testing : 02.04.2018

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **15000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	452	3.01	3.01	96.99	95-100
20	8543	56.95	59.97	40.03	30-70
10	3468	23.12	83.09	16.91	10-35
4.75	2365	15.77	98.85	1.15	0-5

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Job No.: CECTC/VRB /Ward No.09/2018-19 Date: : 02.04.2018

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub-Division, BBMP, Bangalore.

Agency : **Sri. Venugopal Reddy. B.** Contractor, Bangalore.

Name of Work : Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division

Refrence : BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018

Date of Testing : 02.04.2018

Material : 20mm Aggregates

Total Wt. of Aggregates in gms= **5000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
40	0	0	0	100	100
20	234	4.7	4.7	95.3	95-100
10	2465	49.3	54.0	46.0	25-55
4.75	1834	36.7	90.7	9.3	0-10

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Job No.: CECTC/VRB /Ward No.09/2018-19 Date: 02.05.2018

TEST REPORT ON CONCRETE CUBES

Client : **Assistant Executive Engineer,**
(Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub- Division, BBMP,

Agency : **Sri. Venugopal Reddy. B.** Contractor, Bangalore.

Name of Work : Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division

Refrence : BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{15}

Compressive Strength as on : 28 day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	04.04.2018	02.05.2018	8.120	370.2	16.46
2	04.04.2018	02.05.2018	8.136	382.1	16.98
3	04.04.2018	02.05.2018	8.096	386.5	17.18

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Job No.: CECTC/VRB /Ward No.09/2018-19 Date: 02.05.2018

TEST REPORT ON CONCRETE CUBES

Client : **Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub- Division, BBMP,

Agency : **Sri. Venugopal Reddy. B.** Contractor, Bangalore.

Name of Work : Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division

Refrence : BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{15}

Compressive Strength as on : 28 day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	04.04.2018	02.05.2018	8.041	393.2	17.48
2	04.04.2018	02.05.2018	8.113	372.1	16.54
3	04.04.2018	02.05.2018	8.121	378.7	16.83

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Job No.: CE€TC/VRB /Ward No.09/2018-19 Date: 02.05.2018

PRECAST SLAB (CORE) TEST REPORT

Client	:	**Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub-Division, BBMP, Bangalore.
Contractor	:	**Sri. Venugopal Reddy. B.** Contractor, Bangalore.
Name of Work	:	Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division
Reference	:	BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018
No.of Sample Tested	:	03
Date of Testing	:	02.05.2018
Techinical Reference	:	IS:516-1959 (Reaffirmed 1999), SP-24:1983.
Grade of Concrete	:	M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	60.00	0.300	2546.48	1.20	0.960	32.85	16.73	18.07	17.35	21.68
2	50.00	65.00	0.320	2507.30	1.30	0.960	33.65	17.14	18.51	17.77	22.21
3	50.00	70.00	0.350	2546.48	1.40	0.960	34.10	17.37	18.76	18.01	22.51

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Job No.: CECTC/VRB /Ward No.09/2018-19 **Date:** 07.05.2018

Aggregate Impact Value
IS: 2386 Part IV

Client	**Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub- Division, BBMP, Bangalore.
Agency	**Sri. Venugopal Reddy. B.** Contractor, Bangalore.
Name of the Work	Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub
Reference	BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018
Location	At Site
Type of Mix	Wet Mix macadam
Date of Testing	07.05.2018

Sl No.	Details	Trial No. 1	Trial No. 2	Trial No. 3	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	372	378	376	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	82	85	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	290	293	290	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	22.04	22.49	22.87	**22.47**

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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Job No.:CECTC/VRB /Ward No.09/2018-19 Date: 07.05.2018

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub- Division, BBMP, Bangalore.
Agency	**Sri. Venugopal Reddy. B.** Contractor, Bangalore.
Name of Work	Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division
Refrence	BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	Wet Mix Macadam
Date of Testing	07.05.2018

Result : Flakiness Index = **13.65%**

Elongation Index = **10.54%**

Result : Combined Flakiness & Elongation index **24.19%**

Comments:

→ Maximum allowable Flakiness & Elongation Index for Bituminous concrete is 30%

Note:

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Job No.: CECTC/KRIDL/Ward No.184/2018-19 Date : 07.05.2018

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub-Division, BBMP, Bangalore.

Agency : **Sri. Venugopal Reddy. B.** Contractor, Bangalore.

Name of Work : Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division

Reference : BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018

Date of Testing : 07.05.2018

Material Type : Wet Mix Macadam

Sample Location : At Site

Oven Dry Wt (gm): **11680**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	368	368	3.2	96.8	95-100
22.4	4032	4400	37.7	62.3	60-80
11.2	2218	6618	56.7	43.3	40-60
4.75	1649	8267	70.8	29.2	25-40
2.36	1236	9503	81.4	18.6	15-30
0.600	1105	10608	90.8	9.2	8-22
0.075	762	11370	97.3	2.7	0-5

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Job No.: CECTC/VRB /Ward No.09/2018-19 Date: : 07.05.2018

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-11

Client : **Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub-Division, BBMP, Bangalore.

Agency : **Sri. Venugopal Reddy. B.** Contractor, Bangalore.

Name of Work : Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division

Reffence : BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018

Date of Testing : 07.05.2018

Material Type : Wet Mix Macadam

Sample Location : At Site

As per MORTH Table 400-13

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit	22.65	-
2	Plasticity Index, %	Non Plastic	6.0% Maximum.

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Job No.: CECTC/VRB /Ward No.09/2018-19 Date:14.05.2018

TEST REPORT

Client	:	**Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub- Division, BBMP, Bangalore.
Agency	:	**Sri. Venugopal Reddy. B.** Contractor, Bangalore.
Name of the work	:	Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division
Refrence	:	BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018
Source of location	:	Hot mix Plant, Bangalore
Date of testing	:	14.05.2018

The results of the tests conducted on the bitumen sample using for Bituminous Concrete

Sl. No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	64	60 to 70
2	Softening point, ^{0}C	49	Min. 45
3	Ductility at 27^{0}C, cm	100 >	Min. 50
4	Flash Point, ^{0}C	304	Min. 220

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Job No.: CECTC/VRB /Ward No.09/2018-19 Date: 14.05.2018

Aggregate Impact Value

IS: 2386 Part IV

Client	**Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub- Division, BBMP, Bangalore.
Agency	**Sri. Venugopal Reddy. B.** Contractor, Bangalore.
Name of the Work	Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division
Reference	BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	14.05.2018

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	382	383	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	83	84	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	299	299	
4	Aggregate Impact value = percent fines 100* (W_2/W_1) percent	21.73	21.93	**21.83**

Comments:

1. Maximum allowable Aggregate Impact value for Bituminous Concrete is 24%

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Job No.:CECTC/VRB /Ward No.09/2018-19 Date: 14.05.2018

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub- Division, BBMP, Bangalore.
Agency	**Sri. Venugopal Reddy. B.** Contractor, Bangalore.
Name of Work	Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub
Refrence	BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	Bituminous Concrete
Date of Testing	14.05.2018

Result : Flakiness Index = **14.23%**

Elongation Index = **10.98%**

Result : Combined Flakiness & Elongation index **25.21%**

Comments:

→ Maximum allowable Flakiness & Elongation Index for Bituminous Concrete is 30%

Note:

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Assistant Executive Engineer
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Job No.: CECTC/VRB /Ward No.09/2018-19

Date 14.05.2018

Specific Gravity And Water Absorption Test
IS: 2386 Part III

Client	**Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub-Division, BBMP, Bangalore.
Agency	**Sri. Venugopal Reddy. B.** Contractor, Bangalore.
Name of the Work	Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division
Refrence	BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018
Type of Mix	Bituminous Concrete
Date of Testing	14.05.2018

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 3	
1	Weight of aggregate suspended in water with the basket	W_1 g	2025	2023	2026	
2	Weight of basket suspended in water	W_2 g	755	755	755	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1270	1268	1271	
4	Weight of saturated surface dry aggregate in air	W_3 g	2015	2016	2017	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	745	748	746	
6	Weight of oven dried aggregate	W_4 g	2005	2003	2006	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.691	2.678	2.689	2.686
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.728	2.725	2.729	2.727
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.50%	0.65%	0.55%	0.57%

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore-97

Comments:

→ Maximum allowable Aggregate Water absorption value for Bituminous Concrete is 2.0%

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Job No.: CECTC/VRB /Ward No.09/2018-19 Date: 15.05.2018

Aggregate Gradation Test
IS : 2386 Part I

Client	**Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub- Division, BBMP, Bangalore.
Agency	**Sri. Venugopal Reddy. B.** Contractor, Bangalore.
Name of theWork	Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division
Refrence	BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Bituminous Concrete
Date of Testing	15.05.2018

Total Weight of Sample: **5270** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	476	9.03	9.03	90.97	90 - 100	
9.5	537	10.19	19.22	80.78	70 - 88	
4.75	632	11.99	31.21	68.79	53 - 71	
2.36	581	11.02	42.24	57.76	42 - 58	
1.18	532	10.09	52.33	47.67	34 - 48	
0.600	610	11.57	63.91	36.09	26 - 38	
0.300	725	13.76	77.67	22.33	18 - 28	
0.150	412	7.82	85.48	14.52	12 - 20	
0.075	421	7.99	93.47	6.53	4 - 10	

Total Weight of Sample: **5250** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grade-II specification as per MORTH
13.2	480	9.14	9.14	90.86	90 - 100	
9.5	483	9.20	18.34	81.66	70 - 88	
4.75	624	11.89	30.23	69.77	53 - 71	
2.36	622	11.85	42.08	57.92	42 - 58	
1.18	639	12.17	54.25	45.75	34 - 48	
0.600	625	11.90	66.15	33.85	26 - 38	
0.300	510	9.71	75.87	24.13	18 - 28	
0.150	481	9.16	85.03	14.97	12 - 20	
0.075	321	6.11	91.14	8.86	4 - 10	

Assistant Executive Engineer
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Job No: CECTC/VRB /Ward No.09/2018-19 Date: 15.05.2018

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE
AASHTO T 164 & AASHTO T 30

CLIENT	**Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub- Division, BBMP, Bangalore.
AGENCY	**Sri. Venugopal Reddy. B.** Contractor, Bangalore.
NAME OF THE WORK	Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division
REFRENCE	BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018
SAMPLE I/D	Sample Supplied by Agency
DATE OF TESTING	15.05.2018

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	469.5	469
3. Weight of Asphalt and Mineral matter Extracted, g	30.5	31
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	30.5	31
7. Bitumen content in %	6.10	6.20
8. Average	6.15	

GRADATION AFTER EXTRACTION

TABLE - 1

Sieve size in mm	Percent Passing, %		Specified Limits as per MORTH specification table 500-18 (Grading-2)
	Sample 1	Sample 2	
19	100.00	100.00	100
13.2	93.21	94.20	90-100
9.5	86.31	86.32	70-88
4.75	64.10	68.12	53-71
2.36	48.32	43.68	42-58
1.18	42.21	44.10	34-48
0.6	28.00	34.30	26-38
0.3	26.87	22.84	18-28
0.15	14.62	18.10	12-20
0.075	8.10	8.14	4-10

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Job No.: CECTC/VRB /Ward No.09/2018-19

Date: 15.05.2018

TEST REPORT ON STABILITY OF MIX

Client	:	**Assistant Executive Engineer,** (Byatarayanapura/Kodigehalli/Vidyaranyapura))Sub- Division, BBMP, Bangalore.
Agency	:	**Sri. Venugopal Reddy. B.** Contractor, Bangalore.
Name of the Work	:	Desilting of Drains and Filling of Pot Holes in Thindlu, Virupakshapura, HMT Layout, BEL Layout and Surrounding area in Ward No.9 Vidyaranyapura Sub Division
Refrence	:	BBMP/EE/BTP/WO/70/2017-18 Date:12.02.2018
Source of location	:	Hot mix Plant, Bangalore
Type of Mix	:	Bituminous Concrete
Date of Testing	:	15.05.2018

The results of the tests conducted on the bituminous concrete mix sample are as follows:

Sl. No	Description	Test Result 1	Test Result 2	Requirement as per MORTH (Table 500-19)
1	Marshal Stability, Kn	10.25	10.37	9 Kn (min)
2	Marshal flow, mm	2.56	3.64	2 – 4
3	Percent air voids in Mineral Aggregate	13.52	14.28	13 – 15
4	Voids in Compacted Mix	3.24	4.82	3 – 6
5	Percent Voids filled with Bitumen	68.23	69.00	65 - 75
6	Density, g/cc	2.26	2.27	--

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore-97

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For Civil Experts

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